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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/652,998	08/31/2000	D. Mark Durcan	98-1068.06	4016

7590

03/04/2003

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EXAMINER

MAI, ANH D

ART UNIT

PAPER NUMBER

2814

DATE MAILED: 03/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/652,998

Applicant(s)

DURCAN ET AL.

Examiner

Anh D. Mai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13, 14, 67 and 68 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13, 14, 67 and 68 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Amendment

1. The Response filed December 20, 2002 has been entered as Paper No. 16. Claims 13, 14, 67 and 68 are pending.

From Previous Office Action

2. The amendment filed June 24, 2002 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure, as previously applied.

3. Claims 13 and 14 are rejected under 35 U.S.C. 112, first paragraph, for containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, as previously applied.

4. Claims 13, 14, 67 and 68 are rejected under 35 U.S.C. 103(a) for being unpatentable over Becker (U.S. Patent No. 5,770,498), as previously applied.

Response to Arguments

5. Applicant's arguments filed December 20, 2002 have been fully considered but they are not persuasive.

Objections and Rejection Under 35 USC § 112, first paragraph

With respect to a) the *top capacitor plate* (24C) includes a lateral clearance opening at the first level around the contact and does not vertically descend between the first, second and

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third bottom capacitor plates and the contact, Applicant argues that page 13, lines 16-20 and Fig. 8A, provides support for the matter.

However, the term *vertically descend* is referring to the top capacitor plate 24C. Fig. 8A, clearly show a top capacitor plate 24C, vertically descent over the first bottom capacitor plate 20, one on the left, also vertically descent over the second bottom capacitor plate 20, one on the right, and also vertically descent over the third bottom capacitor plate 20, out side of the drawing on the right.

The objection and rejection for this matter thus, maintained.

With respect to b) the *bit line contact* downwardly extends from a vertical height above a top of the first and second bottom electrodes, and c) wherein the *top electrode* includes a lateral clearance opening above the top of the first bottom electrode.

In light of the argument, the objections and rejections for this matters are withdrawn.

Rejection Under 35 USC § 103

With respect to claim 13, Applicant argues that Becker does not teaches: “the *top capacitor plate* includes a lateral clearance opening at the first level around the contact and does not vertically descend between the **first, second and third bottom capacitor plates** and the contact.

Note that the said matter does not have support in the specification as discussed above.

The rejection of claims 13 and 14 are therefore maintained.

With respect to claim 67, Applicant states that claim 67 recites: “the top electrode is capacitively coupled to an interior of the first, second and third bottom electrodes and a portion of the exterior of the second and third electrodes located in the trench”.

As shown Fig. 10, Becker discloses: the top electrode (50) is capacitively coupled to an interior of the **first**, the one on the left, **second**, the one on the right of the contact (54) and **third**, out of the drawing, bottom electrodes (44) and a portion of the exterior of the second and third electrodes (44) located in the trench.

Applicant further states: “The recitation of claim 67 explicitly recites the portion of the bottom electrode container that have top electrode coverage, and no top electrodes coverage of any vertical exterior area between a bottom electrode and contact is present”.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., no top electrodes coverage of any vertical exterior area between a bottom electrode and contact is present) are not recited in the rejected claim (67). Although the claims are interpreted in light of

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the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

With respect to claim 68, Applicant states that claim 68 recites: “wherein the bit line contact insulation region prevents the top electrode from downwardly extending between the bit line contact and the first and second bottom electrodes”.

Again, as shown in Fig. 10, the presence of the insulation region (36) surrounding the contact (54) clearly prevent the top electrode (50) from downwardly extending between the bit line contact (54) and the first and second bottom electrodes (44). Clearly the insulation region (36) has prevent the top electrode (50) from downwardly extending. Thus, met the claim.

Also note that, the limitation of the claim does not include how thick the insulation region is.

The rejection of claims 67 and 68 are therefore maintained.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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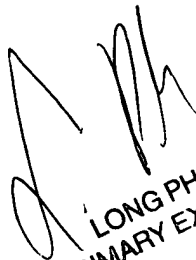
CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh D. Mai whose telephone number is (703) 305-0575. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (703) 308-4918. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

A.M
February 25, 2003


LONG PHAM
PRIMARY EXAMINER